



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/573,770	03/28/2006	Kimmo Laiho	915-002.010	3998

4955 7590 12/21/2007
WARE FRESSOLA VAN DER SLUYS & ADOLPHSON, LLP
BRADFORD GREEN, BUILDING 5
755 MAIN STREET, P O BOX 224
MONROE, CT 06468

EXAMINER

GUZMAN, APRIL S

ART UNIT	PAPER NUMBER
----------	--------------

2618

MAIL DATE	DELIVERY MODE
-----------	---------------

12/21/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/573,770

Applicant(s)

LAIHO ET AL.

Examiner

April S. Guzman

Art Unit

2618

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 September 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 March 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 3/28/06, 5/15/06, 5/7/07, 7/5/07.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

The Examiner acknowledges the receipt of the Applicant's amendment filed on 09/17/2007. Claims 1 and 18 have been amended. **Claims 1-31** are still currently pending in the present application.

Response to Arguments

Applicant's arguments with respect to the rejection(s) of claim(s) 1-31 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of **Itsukaichi (U.S. Patent Application Publication # 2004/0248543 A1)**.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 13-14, 16-19, and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by **Itsukaichi (U.S. Patent Application Publication # 2004/0248543 A1)**.

Consider **claim 1**, Itsukaichi teaches device (read as receiving system 1) (Abstract, Figure 1, Figure 2, Figure 6, [0031]-[0034]) comprising:

an interface (read as cradle 3) adapted to receive a signal carrying a digital broadcast received via an antenna (read as external antennas 4) (Abstract, Figure 1, Figure 2, Figure 6, [0032], and [0041]); and

a loop or coil (read as transmission antennas 34) configured to couple inductively with a corresponding loop or coil (read as built-in antennas 6) included in a mobile terminal (read as portable receiving terminal 2) so as to transmit the signal to the mobile terminal (Abstract, Figure 1, Figure 2, Figure 6, [0032]-[0034], and [0041]).

Consider **claim 13, as applied to claim 1 above**, Itsukaichi further teach comprising:
input for receiving power from an external source (Figure 2, Figure 6, [0037]-[0038], [0040], [0047]); and

a path adapted to deliver power to the mobile terminal to permit recharging of a rechargeable battery (read as batter 23) included in the mobile terminal (Figure 2, Figure 6, [0037]-[0038], [0040], [0047]).

Consider **claim 14, as applied to claim 1 above**, Itsukaichi further teach wherein the loop or coil is a loop and the loop is arranged substantially around a perimeter of a face of the device (Figure 1, Figure 2, Figure 6, [0032]-[0034], and [0041]).

Consider **claim 16, as applied to claim 1 above**, Itsukaichi further teach which is adapted to be placed on a piece of furniture ([0060]).

Consider **claim 17, as applied to claim 1 above**, Itsukaichi further teach an antenna mounted on a roof or to an externally facing side of an external wall of a building ([0032]).

Consider **claim 18**, Itsukaichi teach device (read as receiving system 1) (Abstract, Figure 1, Figure 2, Figure 6, [0031]-[0034]) comprising:

means for receiving a signal carrying a digital broadcast (read as satellite broadcast) received via an antenna (read as external antennas 4) (Abstract, Figure 1, Figure 2, Figure 6, [0032], and [0041]); and

inductive coupling means (read as non-contact transmission) configured to couple inductively with a corresponding inductive coupling means (read as transmission antennas 34 is disposed so as to face each of the built-in antennas 6 of the portable receiving terminal 2) included in a mobile terminal (read as transmission antennas 34 is disposed so as to face each of the built-in antennas 6 of the portable receiving terminal 2) so as to transmit the signal to the mobile terminal (Abstract, Figure 1, Figure 2, Figure 6, [0032]-[0034], and [0041]).

Consider **claim 19**, as applied to **claim 1** above, Itsukaichi further teach apparatus comprising: a mobile terminal including a loop or coil (read as built-in antennas 6) for receiving the signal from the device (Abstract, Figure 1, Figure 2, Figure 6, [0032]-[0034], and [0041]).

Consider **claim 22**, Itsukaichi teach a method comprising:

receiving a signal carrying a digital broadcast (read as satellite broadcast) (Abstract, Figure 1, Figure 2, Figure 6, [0032], and [0041]); and

providing said signal to a loop or coil (read as transmission antennas 34) configured to couple inductively with a corresponding loop or coil included in a mobile terminal (built-in antennas 6 of the portable receiving terminal 2) so as to transmit the signal to the mobile terminal (Abstract, Figure 1, Figure 2, Figure 6, [0032]-[0034], and [0041]).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 2-12, 14, 20-21, and 23-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Itsukaichi (U.S. Patent Application Publication # 2004/0248543 A1)**, and further in view of **Friesen et al. (U.S. Patent # 6,892,080)** herein referred to as Friesen.

Consider **claim 2, as applied to claim 1 above**, Itsukaichi teach a device comprising an interface adapted to receive a signal carrying a digital broadcast received via an antenna and a loop or coil configured to couple inductively with a corresponding loop or coil included in a mobile terminal so as to transmit the signal to the mobile terminal.

However, Itsukaichi fails to teach an amplifier adapted to amplify the signal.

In the related art, Friesen teach an amplifier (read as amplifier 6) adapted to amplify the signal (Figure 1, Figure 2, column 4 lines 36-50, and column 5 lines 1-6).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Friesen into the teachings of Itsukaichi for the purpose of dynamically controlling the power output of an amplifier that can be used in combination with virtually any device and providing an amplifier system that interfaces with a mobile terminal or device which address the inherent loss of power between the mobile terminal's antenna and the device's coupling device.

Consider **claim 3, as applied to claim 2 above**, Itsukaichi as modified by Friesen further teach wherein: said amplifier is adapted to be powered by the mobile terminal (Friesen – Figure 1, Figure 2, and column 4 lines 36-50).

Consider **claim 4, as applied to claim 2 above**, Itsukaichi as modified by Friesen further teach wherein: said amplifier adapted to be controlled by the mobile terminal (Friesen – Figure 2, column 5 lines 56-67, column 6 lines 1-5, and column 6 lines 11-38).

Consider **claim 5, as applied to claim 4 above**, Itsukaichi as modified by Friesen further teach wherein: said amplifier is adapted to intermittently operate under control of the mobile terminal (Friesen – Figure 2, column 6 lines 11-38, and column 7 lines 20-37).

Consider **claim 6, as applied to claim 2 above**, Itsukaichi as modified by Friesen further teach comprising:

a detector adapted to determine a position of the mobile terminal (Itsukaichi – [0056]; Friesen - Figure 2, Figure 4, Figure 5, column 5 lines 14-55, and column 6 lines 11-38); and

a controller adapted to control operation of said amplifier in dependence upon the position of the mobile terminal (Friesen - Figure 2, Figure 4, Figure 5, column 5 lines 14-55, and column 6 lines 11-38).

Consider **claim 7, as applied to claim 6 above**, Itsukaichi as modified by Friesen further teach wherein: the detector comprises a switch (read as pushdown switch 27) to determine whether the mobile terminal is attached to the extension device (Itsukaichi – Figure 2, Figure 6, [0038], [0042], and [0047]; Friesen – Figure 2, Figure 4, Figure 5, column 5 lines 14-55, and column 6 lines 11-38).

Consider **claim 8, as applied to claim 6 above**, Itsukaichi as modified by Friesen further teach wherein: the detector comprises a sensor adapted to determine whether the mobile terminal is located within a predetermined distance of the extension device (Friesen – Figure 2, Figure 4, Figure 5, column 5 lines 14-55, and column 6 lines 11-38).

Consider **claim 9, as applied to claim 6 above**, Itsukaichi as modified by Friesen further teach wherein: the controller is adapted to cause the amplifier to reduce gain when the mobile terminal is in a given position (Friesen – Figure 2, Figure 4, Figure 5, column 5 lines 14-55, and column 6 lines 11-38).

Consider **claim 10, as applied to claim 6 above**, Itsukaichi as modified by Friesen further teach wherein: the controller is adapted to cause the amplifier to be by-passed when the

mobile terminal is in a given position (Friesen – Figure 2, Figure 4, Figure 5, column 6 lines 11-38, and column 7 lines 20-37).

Consider **claim 11, as applied to claim 6 above**, Itsukaichi as modified by Friesen further teach comprising:

an antenna for receiving an amplified signal from the amplifier and radiatively transmitting the amplified signal to the mobile terminal (Friesen – column 4 lines 63-67, and column 5 lines 1-6); wherein

the controller is adapted to cause the signal to be routed to the loop or coil when the mobile terminal is in a given position (Itsukaichi – [0041]-[0042], [0047], and [0056]-[0057]) and to be routed to the amplifier when not (Friesen - column 4 lines 51-67, column 5 lines 1-6, and column 6 lines 11-28).

Consider **claim 12, as applied to claim 1 above**, Itsukaichi teach a device comprising an interface adapted to receive a signal carrying a digital broadcast received via an antenna and a loop or coil configured to couple inductively with a corresponding loop or coil included in a mobile terminal so as to transmit the signal to the mobile terminal.

However, Itsukaichi fails to teach a filter adapted to obtain said signal from at least one other signal.

In the related art, Friesen teach a filter adapted to obtain said signal from at least one other signal (Figure 2, column 4 lines 51-67, and column 5 lines 1-14).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Friesen into the teachings of Itsukaichi for the purpose of dynamically controlling the power output of an amplifier that can be used in

combination with virtually any device and providing an amplifier system that interfaces with a mobile terminal or device which address the inherent loss of power between the mobile terminal's antenna and the device's coupling device.

Consider **claim 20, as applied to claim 19 above**, Itsukaichi teach a device comprising means for receiving a signal carrying a digital broadcast received via an antenna; and inductive coupling means configured to couple inductively with a corresponding inductive coupling means included in a mobile terminal so as to transmit the signal to the mobile terminal.

However, Itsukaichi fails to teach wherein the device further comprises an amplifier arranged to amplify the signal.

In the related art, Friesen teach wherein the device further comprises an amplifier arranged to amplify the signal (Figure 1, Figure 2, column 4 lines 36-50, and column 5 lines 1-6).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Friesen into the teachings of Itsukaichi for the purpose of dynamically controlling the power output of an amplifier that can be used in combination with virtually any device and providing an amplifier system that interfaces with a mobile terminal or device which address the inherent loss of power between the mobile terminal's antenna and the device's coupling device.

Consider **claim 21, as applied to claim 20 above**, Itsukaichi as modified by Friesen further teach wherein the mobile terminal is configured to cause said amplifier to operate when reception of a time slice is expected (Friesen – column 3 lines 34-37, and column 7 lines 20-37).

Consider **claim 23, as applied to claim 22 above**, Itsukaichi teach a method comprising: receiving a signal carrying a digital broadcast; and providing said signal to a loop or coil configured to couple inductively with a corresponding loop or coil included in a mobile terminal so as to transmit the signal to the mobile terminal.

However, Itsukaichi fail to teach amplifying the signal.

In the related art, Friesen teach amplifying the signal (Figure 1, Figure 2, column 4 lines 36-50, and column 5 lines 1-6).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Friesen into the teachings of Itsukaichi for the purpose of dynamically controlling the power output of an amplifier that can be used in combination with virtually any device and providing an amplifier system that interfaces with a mobile terminal or device which address the inherent loss of power between the mobile terminal's antenna and the device's coupling device.

Consider **claim 24, as applied to claim 22 above**, Itsukaichi teach a method comprising: receiving a signal carrying a digital broadcast; and providing said signal to a loop or coil configured to couple inductively with a corresponding loop or coil included in a mobile terminal so as to transmit the signal to the mobile terminal.

However, Itsukaichi fail to teach further comprising intermittently operating an amplifier adapted to amplify the signal under the control of the mobile terminal.

In the related art, Friesen teach further comprising intermittently operating an amplifier adapted to amplify the signal under the control of the mobile terminal (Figure 2, column 5 lines 56-67, column 6 lines 1-5, and column 6 lines 11-38).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Friesen into the teachings of Itsukaichi for the purpose of dynamically controlling the power output of an amplifier that can be used in combination with virtually any device and providing an amplifier system that interfaces with a mobile terminal or device which address the inherent loss of power between the mobile terminal's antenna and the device's coupling device.

Consider **claim 25, as applied to claim 22 above**, Itsukaichi teach a method comprising: receiving a signal carrying a digital broadcast; and providing said signal to a loop or coil configured to couple inductively with a corresponding loop or coil included in a mobile terminal so as to transmit the signal to the mobile terminal.

However, Itsukaichi fail to teach detecting a position of the mobile terminal; and controlling operation of an amplifier in dependence upon the position of the mobile terminal.

In the related art, Friesen teach detecting a position of the mobile terminal (Itsukaichi – [0056]; Friesen - Figure 2, Figure 4, Figure 5, column 5 lines 14-55, and column 6 lines 11-38); and controlling operation of an amplifier in dependence upon the position of the mobile terminal (Figure 2, Figure 4, Figure 5, column 5 lines 14-55, and column 6 lines 11-38).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Friesen into the teachings of Itsukaichi for the purpose of dynamically controlling the power output of an amplifier that can be used in combination with virtually any device and providing an amplifier system that interfaces with a mobile terminal or device which address the inherent loss of power between the mobile terminal's antenna and the device's coupling device.

Consider **claim 26, as applied to claim 25 above**, Itsukaichi as modified by Friesen further teach detecting whether the mobile terminal is attached to the extension device (Itsukaichi – [0056]; Friesen - Figure 2, Figure 4, Figure 5, column 5 lines 14-55, and column 6 lines 11-38).

Consider **claim 27, as applied to claim 25 above**, Itsukaichi as modified by Friesen further teach sensing whether the mobile terminal is attached to the extension device (Itsukaichi – [0056]; Friesen - Figure 2, Figure 4, Figure 5, column 5 lines 14-55, and column 6 lines 11-38).

Consider **claim 28, as applied to claim 25 above**, Itsukaichi as modified by Friesen further teach reducing gain when the mobile terminal is in a given position (Friesen – Figure 2, Figure 4, Figure 5, column 5 lines 14-55, and column 6 lines 11-38).

Consider **claim 29, as applied to claim 25 above**, Itsukaichi as modified by Friesen further teach by-passing the amplifier when the mobile terminal is in a given position (Friesen – Figure 2, figure 4, Figure 5, column 6 lines 11-38, and column 7 lines 20-37).

Consider **claim 30, as applied to claim 22 above**, Itsukaichi teach a method comprising: receiving a signal carrying a digital broadcast; and providing said signal to a loop or coil configured to couple inductively with a corresponding loop or coil included in a mobile terminal so as to transmit the signal to the mobile terminal.

However, Itsukaichi fail to teach routing the signal to the loop or coil when the mobile terminal is within a given range; routing the signal to an amplifier when the mobile terminal is outside the given range.

In the related art, Friesen teach routing the signal to the loop or coil when the mobile terminal is within a given range (column 4 lines 63-67, and column 5 lines 1-6);

routing the signal to an amplifier when the mobile terminal is outside the given range (Friesen - column 4 lines 51-67, column 5 lines 1-6, and column 6 lines 11-28).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Friesen into the teachings of Itsukaichi for the purpose of dynamically controlling the power output of an amplifier that can be used in combination with virtually any device and providing an amplifier system that interfaces with a mobile terminal or device which address the inherent loss of power between the mobile terminal's antenna and the device's coupling device.

Consider **claim 31, as applied to claim 30 above**, Itsukaichi as modified by Friesen further teach radiatively transmitting an amplified signal output from the amplifier (Friesen - column 4 lines 63-67, and column 5 lines 1-6).

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Itsukaichi (U.S. Patent Application Publication # 2004/0248543 A1)**.

Consider **claim 15, as applied to claim 1 above**, Itsukaichi teach the loop or coil except for the specific area of the loop or coil of between 10 and 50 cm².

Nonetheless, to the extent that Itsukaichi does not specify the exact range of the area of the loop or coil, this figure would have been a matter of routine experimentation to one of ordinary skill in the art at the time the invention was made in order to couple signals from an outside antenna to a portable device with transmits signals inductively via loop or coil. See In re

Aller, 105 USPQ 233 (CCPA 1995) (Where general conditions of the claim are disclosed in the prior art, it is not inventive to discover optimal or workable ranges by routine experimentation)

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: see PTO-892 Notice of References Cited.

Any response to this Office Action should be **faxed to (571) 273-8300 or mailed to:**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Hand-delivered responses should be brought to

Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314

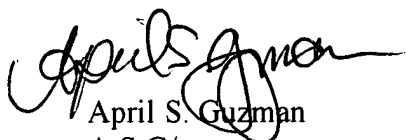
Any inquiry concerning this communication or earlier communications from the examiner should be directed to April S. Guzman whose telephone number is 571-270-1101. The examiner can normally be reached on Monday - Thursday, 8:00 a.m. - 5:00 p.m., EST.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lana Le can be reached on 571-272-7891. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Application/Control Number:
10/573,770
Art Unit: 2618

Page 15

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


April S. Guzman
A.S.G/asg


12-07-07
LANA LE
PRIMARY EXAMINER